

**FIGURE 1A**CHIR 12.12 light chain:

leader:

MALPAQLLGLLMLWVSGSSG

variable:

DIVMTQSPLSLTVPGEPAISCRSSQSLLYSNGYNYLDWYLQKPGQSPQVLISLGSNRASG  
VPDRFSGSGGTDFTLKISRVEAEDVGVYYCMQARQTPFTFGPGTKVDIR

constant:

RTVAAPSVFIFPPSDEQLKSGTASVVCLLNFPYPREAKVQWKVDNALQSGNSQESVTEQDSK  
DSTYLSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC**FIGURE 1B**CHIR-12.12 heavy chain:

leader:

MEFGLSWVFLVAILRGVQC

variable:

QVQLVESGGGVVQPGRSLRLSCAASGFTFSSYGMHWVRQAPGKGLEWVAVISYEESNRYHAD  
SVKGRFTISRDNKITLYLQMNSLRTEDTAVYYCARDGGIAAPGPDYWGQGTLVTVSS

constant:

ASTKGPSVFPLAPASKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGL  
YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVF  
LFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVV  
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSL  
TCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFCSSV  
MHEALHNHYTQKSLSLSPGK

alternative constant region:

ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGL  
YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVF  
LFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVV  
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSL  
TCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFCSSV  
MHEALHNHYTQKSLSLSPGK

**FIGURE 2A**

DNA sequence of light chain of CHIR-12.12:

5'atggcgctccctgctcagctcctggggctgctaagtctctgggtctctggatccagtggggatattgtgatgactcagctccactctc  
cctgaccgtcacccttgagagccggcctccatctcctgcagggtccagtcagagcctcctgtatagtaattggatacaactatttgattg  
gtacctgcagaagccagggcagctctccacaggctcctgatctcttgggttctaatacgggcctccgggggtccctgacagggtcagtgga  
gtggatcaggcacagattttacactgaaaatcagcagagtgaggctgaggatgttgggggttattactgcatgcaagctcgacaaact  
ccattcactttcggcctgggaccaaagtggatatcagacgaactgtggctgcaccatctgtcttcatcttcccgccatctgatgagcagt  
tgaaatctggaactgcctctgttgtgtgcctgtgaataacttctatcccagagaggccaaagtacagtggaaggtggataacgccctcc  
aatcgggtaactcccaggagagtgacacagagcaggacagcaaggacagcacctacagcctcagcagcaccctgacgctgagcaa  
agcagactacgagaaacacaaagtctacgcctgcgaagtcacccatcaggggcctgagctcgccgctcacaagagcttcaacaggg  
gagagtgttag3'

**FIGURE 2B**

DNA sequence of heavy chain of CHIR-12.12 (including introns):

5'atggagtttgggctgagctgggttttctgttgcattttaagaggtgtccagtgtcagggtgcagttggtggagctgggggaggcgt  
gggtccagcctgggagggtccctgagactctcctgtgcagcctctggattcaccttcagtagctatggcatgactgggtccgccaggctc  
caggcaaggggctggagtggtggcagttatatcatatgaggaaagtaatagataccatgcagactccgtgaagggccgattcacca  
tctccagagacaattccaagatcacgctgtatctgcaaatgaacagcctcagaactgaggacacggctgtgtattactgtgcgagagat  
gggggtatagcagcactgggcctgactactggggccagggaaccttggtcaccgtctcctcagcaagtaaccaagggcccatccgt  
cttccccctggcgcccgtagcaagagcacctctgggggacagcggccctgggctgcctggtcaaggactactccccgaaccgg  
tgacggtgtcgtggaactcaggcgccctgaccagcggcgtgcacacctccccggctgtcctacagtctcaggactctactccctcag  
cagcgtggtgaccgtgccctccagcagcttgggcacccagacctacatctgcaactgaatcacaagcccagcaacaccaaggtgg  
acaagagagttggtgagaggccagcacagggaggggagggtgtctgtggaagccagggtcagcgtcctgctggacgcatcccc  
gctatgcagtcctcagtcaggggcagcaaggcaggccccgtctgcctcttccccggaggcctctgcccggccactcatgctcagg  
gagagggtcttctggcttttccccaggctctgggcaggcacaggctaggtgcccttaacccaggccctgcacacaaaggggcaggt  
gctgggctcagacctgccaagagccatatccgggaggacctgccctgacctaaagccccacccaaaggccaaactctccactccc  
tcagctcggacaccttctctctccagattccagtaactcccaatcttctctcgcagagcccaaatcttgtgacaaaactcacacatgc  
ccaccgtgcccaggtaagccagcccaggcctcgcctccagctcaaggcgggacaggtgccctagagtagcctgcacccaggac  
aggccccagccgggtgctgacacgtccacctccatctctcctcagcacctgaactcctggggggaccgtcagttctcttcccccc  
aaaacccaaggacacctcatgatctcccggaccttgagggtcacatgcgtggtggtggacgtgagccacgaagacctgagggtca  
agttcaactggtacgtggacggcgtggaggtgcataatgccaagacaaagccgcgggaggagcagtacaacagcacgtaccgtgt  
ggtcagcgtcctcaccgtcctgcaccaggactggctgaatggcaaggagtacaagtgaaggtctccaacaaagccctcccagccc  
ccatcgagaaaacctctccaaagccaaaggtgggacctgtggggtgcgagggccacatggacagaggccggctcgcccaccc  
tctgccctgagagtgaccgtgtaccaacctctgtccctacagggcagccccgagaaccacaggtgtacacctgccccatccggg  
gaggagatgaccaagaaccaggtcagcctgacctgcctggtcaaaggcttctatcccagcgacatcgccgtggagtgaggagcaa  
tgggcagccgggagaacaactacaagaccacgcctcccgtgtgactccgacggctccttcttctctatagcaagctcaccgtggac  
aagagcaggtggcagcagggaacgtcttctcatgtccgtgatgcatgaggctctgcacaaccactacacgcagaagagcctctcc  
ctgtctccgggtaaatga3'

**FIGURE 3A**CHIR-5.9 light chain:

leader:

MALLAQLLGLLMLWVPGSSG

variable:

AIVMTQPPPLSSPVTLGQPASISCRSSQSLVHSDGNTYLNWLQQRPGQPPRLLIYKFFRRLSG  
VPDRFSGSGAGTDFTLKISRVEAEDVGYYCMQVTQFPHTFGQGRLEIK

constant:

RTVAAPSVFIFPPSDEQLKSGTASVVCLLNFPYPREAKVQWKVDNALQSGNSQESVTEQDSK  
DSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC**FIGURE 3B**CHIR-5.9 heavy chain:

leader:

MGSTAILALLLAVLQGVCA

variable:

EVQLVQSGAEVKKPGESLKISCKGSGYSFTSYWIGWVRQMPGKGLEWMGIIYPGDS DTRYSP  
SFQGQVTISADKSISTAYLQWSSLKASDTAMYYCARGTAAGR DYYYYYGM D VWGQGTTTVTVS  
S

constant:

ASTKGPSVFPLAPASKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGL  
YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVF  
LFPPKPKD TLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVV  
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSL  
TCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSV  
MHEALHNHYTQKSLSLSPGK

alternative constant region:

ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGL  
YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVF  
LFPPKPKD TLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVV  
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSL  
TCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSV  
MHEALHNHYTQKSLSLSPGK

**FIGURE 4A**

Coding sequence for short isoform of human CD40:

```
1 atggttcgtc tgcctctgca gtgcgtcctc tggggctgct tgctgaccgc tgcctatcca
61 gaaccaccca ctgcatgcag agaaaaacag tacctaataa acagtcagtg ctgttctttg
121 tgccagccag gacagaaact ggtgagtgac tgcacagagt tcttgaaac ggaatgcctt
181 ccttgcggtg aaagcgaatt cctagacacc tggaacagag agacacactg ccaccagcac
241 aaatactgcg accccaacct agggcttcgg gtccagcaga agggcacctc agaaacagac
301 accatctgca cctgtgaaga aggtggcac tgtacgagtg aggcctgtga gagctgtgtc
361 ctgcaccgct catgctcgcc cggctttggg gtcaagcaga ttgctacagg ggtttctgat
421 accatctgcg agccttgccc agtcggcttc ttctccaatg tgtcatctgc ttcgaaaaa
481 tgtcacctt ggacaagtc cccaggatcg gctgagagcc ctggtggtga tccccatcat
541 cttcgggata ctgttgcca tcctcttggt gctggtctt atcaaaaagg tggccaagaa
601 gccaaccaat aa
```

**FIGURE 4B**

Encoded short isoform of human CD40:

```
1 mvrplqcvl wgclltavhp epptacrekq ylnsqccsl cpggqklvsd cteftetecl
61 pcgesefldt wnrethchqh kyedpnlglr vqqkgtsetd tictceegwh ctseacescv
121 lhrscspgfg vkqiatgvsd ticepcvpgf fsnvssafek chpwtrspgs aespaggdphh
181 lrdpvchplg aglyqkggqe anq
```

**FIGURE 4C**

Coding sequence for long isoform of human CD40:

```
1 atggttcgtc tgcctctgca gtgcgtcctc tggggctgct tgctgaccgc tgtccatcca
61 gaaccaccca ctgcatgcag agaaaaacag tacctaataa acagtcagtg ctgttctttg
121 tgccagccag gacagaaact ggtgagtgac tgcacagagt tctactgaaac ggaatgcctt
181 ccttgcgggtg aaagcgaatt cctagacacc tggaacagag agacacactg ccaccagcac
241 aaatactgcg accccaacct agggcttcgg gtccagcaga agggcacctc agaaacagac
301 accatctgca cctgtgaaga aggctggcac tgtacgagtg aggcctgtga gagctgtgtc
361 ctgcaccgct catgctcgcc cggctttggg gtcaagcaga ttgctacagg ggtttctgat
421 accatctgcg agccctgccc agtcggcttc ttctccaatg tgtcatctgc ttctgaaaaa
481 tgcaccctt ggacaagctg tgagaccaa gacctggttg tgcaacaggc aggcacaaac
541 aagactgatg ttgtctgtgg tcccaggat cggctgagag ccctgggtgt gatccccatc
601 atcttcggga tctgtttgc catctcttg gtgctggtct ttatcaaaaa ggtggccaag
661 aagccaacca ataaggcccc ccacccaag caggaacccc aggagatcaa tttcccgac
721 gatcttctg gctccaacac tgctgctcca gtgcaggaga ctttacatgg atgccaaccg
781 gtcaccagg aggatggcaa agagagtcgc atctcagtgc aggagagaca gtga
```

**FIGURE 4D**

Encoded long isoform of human CD40:

```
1 mvrplqcvl wgciltavhp epptacrekq ylinsqccsl cpggqklvsd cteftetecI
61 pcgesefldt wnrethchqh kydpnlglr vqqkgtsetd tictceegwh ctseacescv
121 lhrscspgfg vkqiatgvsd ticepcvpgf fsnvssafek chpwtscetk dlvvqqagtn
181 ktdvvcgpgd rlrallvupi ifgilfaill vlvfikkvak kptnkaphpk qepqeinfpd
241 dlpgsntaap vqetlhgcqp vtqedgkesr isvqerq
```

**FIGURE 5**